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Improving Electronic Logbook Searches Using Natural Language Processing

Thursday, March 7, 2024 5:00 PM (20 minutes)

The electronic logbook (elog) system used at Brookhaven National Laboratory's Collider-Accelerator Department (C-AD) allows users to customize logbook settings, including specification of favorite logbooks. Using machine learning techniques, configurations can be further personalized to provide users with a view of entries that match their specific interests. Natural language processing (NLP) models are used to augment the elog system by classifying and finding similarities in entries. A command line interface tool is used to ease automation of NLP tasks in the controls system. A test web interface will be developed for users to enter phrases, terms, and sentences as search terms for the NLP models. The website will return useful information about a given search term. This technique will create recommendations for each user, filtering out unnecessary results generated by current search techniques.

Primary Keyword

AI-based controls

Secondary Keyword

AI-based controls

Tertiary Keyword

AI-based controls

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